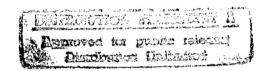
FINAL REPORT

LIMITED ENERGY STUDY, INSULATE BRICK BUILDINGS FORT LEONARD WOOD, MISSOURI

ENERGY ENGINEERING ANALYSIS PROGRAM (EEAP)

Prepared for

U.S. Army Corps of Engineers Kansas City District Kansas City, Missouri



Under

U.S. Army Engineer District, Mobile Indefinite Delivery A-E Contract Contract No. DACA01-94-D-0033 Delivery Order 0009 EMC No. 1406-011

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May 1996



By

E M C Engineers, Inc. 2750 S. Wadsworth, Suite C-200 Denver, Colorado 80227 303/988-2951

DEPARTMENT OF THE ARMY

CONSTRUCTION ENGINEERING RESEARCH LABORATORIES, CORPS OF ENGINEERS P.O. BOX 9005

CHAMPAIGN, ILLINOIS 61826-9005

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EXECUTIVE SUMMARY

AUTHORIZATION FOR STUDY

This study was conducted and this report prepared under Contract No. DACA01-94-D-0033, Delivery Order No. 0009, issued to E M C Engineers, Inc. (EMC) by the U.S. Army Engineer District, Mobile, on 17 October 1995. The delivery order was managed by the Kansas City District Corps of Engineers for Fort Leonard Wood, Missouri.

PURPOSE OF STUDY

The purpose of the Limited Energy Study, Insulate Brick Buildings, is to determine the economic feasibility of installing insulation in 100 existing brick buildings in the 600, 700, 800, and 1000 areas at Fort Leonard Wood, Missouri. The existing brick wall construction has an approximate R-value of 4 which is low for this geographic location.

APPROACH

The approach taken in performing the study included the following:

- Perform a field survey to document existing conditions of the building envelope such as exterior wall construction, window types, and roof construction; document the interior equipment and objects located on or near exterior walls (because equipment and objects must be relocated before wall insulation can be installed); interview the building managers for building information, occupancy schedules, lighting schedules, and equipment schedules; and record nameplate information of existing mechanical and electrical systems.
- Collect available information and data relative to historical energy usage, current utility rate schedules, building and equipment utilization, and existing energy conservation efforts.
- Review existing building drawings, as available.
- Determine an optimum R-value for exterior walls and roofs using a life cycle cost method; calculate the life cycle cost for installing wall and roof insulation in a typical building at the Fort Leonard Wood.
- Determine the life cycle costs for two types of wall insulation using fiberglass batt insulation and rigid board insulation, and fiberglass batt roof insulation.

- From the list of 100 buildings, determine a representative building from each of the ten building types. For instance, select one representative building out of the group of Mess Hall buildings.
- Evaluate the energy savings available if insulation is installed. Calculate the energy savings using computer energy simulations for the representative buildings, and extrapolate energy savings to identical and similar buildings.
- Evaluate the implementation costs for each of the wall insulation types for each representative building, and extrapolate the implementation costs to identical and similar buildings.
- Summarize energy savings and costs for each building, ranking the buildings by Savings-to-Investment Ratio (SIR) in order of priority.
- Perform LCCAs in accordance with the Energy Conservation Investment Program (ECIP) guidance, using the calculated energy savings and implementation costs.
- Prepare a written report documenting the existing conditions, wall insulation evaluation, energy savings analyses and calculations, implementation costs, recommendations, and conclusions.

METHOL OF ANALYSIS

The method of analysis used in this study included an optimum insulation analysis, energy savings calculations, determination of construction costs, and life cycle cost analysis (LCCA). The optimum insulation analysis was initially performed to determine the optimum thicknesses of insulation for use in the energy savings calculations. The energy savings calculations and construction costs were computed for the energy conservation opportunities (ECOs) evaluated. The energy savings and construction costs were used in the LCCAs to determine the Savings-to-Investment Ratios (SIRs) and Simple Paybacks for the ECOs.

Three categories of insulation construction were evaluated for the purpose of increasing the R-value of exterior walls and roofs. The R-value is a measure of thermal resistance to heat flow through a material. Installing insulation on the exterior walls and roof will increase the total R-values, and therefore will reduce heat loss and provide energy savings. The three categories of insulation evaluated for the walls and roof are as follows:

- Fiberglass batt insulation installed on walls
- Rigid insulation installed on walls
- Fiberglass batt insulation installed on roof.

Optimum Insulation Analysis

The life cycle costs were performed to determine the optimum wall R-values and the roof R-value that would be the most cost effective at Fort Leonard Wood. A representative building (Building 625 - Battalion Headquarters) was chosen as a model building to evaluate the life cycle costs. A life cycle cost was performed for each of the three categories of insulation construction and several thicknesses of insulation within each category. Table ES-1 below summarizes the life cycle costs for these three categories.

Table ES-1. Summary of Life Cycle Costs

			Life (Cycle Cos	sts (\$)		
Insulation Category	Thickne	esses of F	iberglass	Batt Ins	ulation I	nstalled o	n Walls
	0 in.	1 in.	3.5 in.	6 in.	9 in.	12 in.	-
Wall w/ Fiberglass Batt Insul.	53,449	64,526	61,767	62,414	69,024	70,827	-
	Th	icknesses	of Rigid	Insulati	on Instal	led on W	alls
	0 in.	0.75 in.	1 in.	1.5 in.	2 in.	2.5 in.	3 in.
Wall w/ Rigid Insulation	53,449	59,364	59,157	59,120	59,513	60,195	60,753
	Thickn	esses of	Fiberglas	s Batt Ins	ulation I	nstalled	on Roof
	0 in.	1 in.	3.5 in.	6 in.	9 in.	12 in.	-
Roof w/ Fiberglass Batt Insul.	64,862	64,266	61,167	57,773	59,562	61,365	-

The lowest life cycle costs for insulation installed are the shaded items above. These life cycle costs represent the optimum thicknesses of insulation to be installed on the walls and roof. Table ES-2 below presents the optimum thicknesses of insulation.

Table ES-2. Optimum Insulation Thickness

Insulation Category	Optimum Insulation Thickness
Wall w/ Fiberglass Batt Insulation	3.5 in.
Wall w/ Rigid Insulation	1.5 in.
Roof w/ Fiberglass Batt Insulation	6.0 in.

The optimum wall insulation thicknesses are used in evaluating energy savings for the two types of wall insulation.

The roof insulation was evaluated for its optimum thickness to compare it to the existing thickness of roof insulation. The majority of the buildings have been retrofitted with 6 inches of fiberglass batt insulation, which is the optimum thickness for fiberglass batt roof insulation. Therefore, no further evaluation was performed for roof insulation.

Energy Savings Calculations

Building energy baselines were modeled on the BEACON energy analysis computer program for the ten representative buildings. The building energy baselines reflect the existing conditions of the buildings. The as-built drawings and field survey data provided the source for building inputs to the baselines.

The building energy baselines for the ten representative buildings were used to create ECO energy simulations. The energy simulation for ECO-1 is the baseline modified with the wall U-values of the additional fiberglass batt wall insulation. Similarly, the energy simulation for ECO-2 is the baseline modified with the wall U-values of the additional rigid wall insulation.

- The annual energy savings for natural gas and electricity for the representative buildings were calculated by subtracting the ECO energy use from the baseline energy use. The energy savings were then extrapolated to similar buildings by prorating the savings on a square foot basis.
- Construction costs were generated for the representative building ECOs. As-built
 drawings provided dimensions for the wall areas being renovated. Field survey data
 provided information on the quantity and type of interior equipment and objects
 required to be relocated. Costs for the renovations and relocations were obtained from
 the RS Means cost estimating guides and material manufacturers.
- The LCCAs were completed for the representative building ECOs. A 20 year
 economic life was used in the LCCAs. The discount factors were obtained from the
 Energy Price Indices and Discount Factors for Life-Cycle Cost Analysis 1996 NISTIR 85-3273-10 (Rev. 10/95). The construction costs were entered into the LCCA
 calculation sheets.

The investment costs for the representative buildings, calculated by the LCCAs, were extrapolated to similar buildings by prorating the costs on a square foot basis.

The LCCAs also calculate SIRs and Simple Paybacks for the ECOs. The Energy Conservation Investment Program (ECIP) Guidance (dated January 1994) was used in the LCCAs. ECOs with SIRs greater than 1.25 and Simple Paybacks less than 10 years will qualify for funding. ECOs with SIRs less than 1.25 and Simple Paybacks greater than 10 years did not qualify for funding.

SUMMARY

The 100 buildings in this study were divided into ten groups on the basis of similar building use and function, with one representative building designated per group. The ten representative buildings were evaluated for two energy conservation opportunities (ECOs) each. ECO-1 represents the installation of fiberglass batt wall insulation, and ECO-2 represents the installation of rigid wall insulation. Energy savings, construction costs, and life cycle cost analyses (LCCAs) were calculated for each ECO.

The ten representative buildings are listed in Table ES-3 below.

Table ES-3. Representative Buildings for Field Survey

Bldg	Bldg	Sq	
No.	Name	Ft	Use
639	Branch PX	5,413	Retail Store
636	Brigade HQ	9,236	Administration
637	Chapel	8,949	Church and Administration
630	Mess Hall	13,280	Dining Facility
638	Administration Bldg	3,700	Administration
640	Gymnasium	20,425	Sports Facility
655	Administration/Supply	12,134	Administration and Supply
o51	Barracks, with A/C	40,990	Barracks
730	Barracks, without A/C	40,640	Barracks
625	Battalion HQ	6,163	Administration

The annual energy savings for the representative buildings were extrapolated to similar buildings in each building group. The extrapolation was performed on a square foot basis. Likewise, the construction costs were extrapolated to similar buildings in each building group.

The economic summary for ECO-1 and ECO-2 is presented in Table ES-4 beginning on page ES-6. This table ranks the ECOs from highest to lowest savings-to-investment ratio (SIR). The highest SIR calculated is 0.47 with a 35.5 year Simple Payback for Building 637, a Chapel building.

RECOMMENDATIONS

The ECOs presented in Table ES-4 have SIRs less than 1.25 and Simple Paybacks greater than 10 years. These ECOs do not qualify for funding under the ECIP and, therefore, are not recommended for implementation.

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ECONOMIC SUMMARY OF ECOS-

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				NAT CAC	<u> </u>	TOTAL	Ü	SAS TAN	<u> </u>	ELEC.	TOTAL				
					ERGY	ENERGY				COST	COST	TOTAL	DISCOUNTE	SIMPLE	
BLDG N	BI DO NAME	BUILDING ARFA (SF)	ECO NO.	SAVINGS SA (MBtu/yr) (MI	VINGS Btu/yr)	SAVINGS (MBtu/yr)	S VINGS (KW)	SAVINGS (\$/yr)	SAVINGS (\$/yr)	SAVINGS (\$/yr)	SAVINGS (\$/yr)	T (\$)	(\$)	K (yrs)	SIR
637	Chanel	8.949	ECO 1	229.45	35.97	265.42	2.70	\$1,216	\$263	\$200	\$1,680	\$29,688	\$27,931	35.53	0.47
742	Chapel	8,949	ECO 1	229.45	35.97	265.42	2.70	\$1,216	\$263	\$200	\$1,680	\$59,688	\$27,931	35.53	0.47
843	Chapel	8,890	ECO 1	227.94	35.74	263.67	2.68	\$1,208	\$262	\$199	\$1,669	\$59,295	\$27,747	35.53	0.47
637	Chapel	8,949	ECO 2	232.76	37.24	270.00	2.80	\$1,234	\$273	\$208	\$1,714	\$63,708	\$28,470	37.17	0.45
742	Chapel	8,949	ECO 2	232.76	37.24	270.00	2.80	\$1,234	\$273	\$208	\$1,714	\$63,708	\$28,470	37.17	0.45
843	Chanel	8,890	ECO 2	231.23	36.99	268.22	2.78	\$1,225	\$271	\$206	\$1,703	\$63,288	\$28,282	37.17	0.45
930	Branch PX	5,413	ECO 1	49.11	8.26	57.37	1.30	\$260	\$60	\$96	\$417	\$22,547	\$6,757	54.04	0.30
835	Branch PX	6,240	ECO 1	56.61	9.52	66.13	1.50	\$300	\$70	\$111	\$481	\$25,992	\$7,789	54.04	0.30
835	Branch PX	6.240	ECO 2	00.09	10.27	70.27	1.50	\$318	\$75	\$111	\$504	\$28,015	\$8,183	55.54	0.29
8	Branch PX	5.413	ECO 2	52.05	8.91	96'09	1.30	\$276	\$65	\$96	\$438	\$24,302	\$7,099	55.54	0.29
88	Macs Hall	13.280	ECO 2	138.84	9.08	147.92	1.50	\$736	\$66	\$111	\$914	\$55,748	\$15,485	61.02	0.28
832	Mess Hall	13.280	ECO 2	138.84	9.08	147.92	1.50	\$736	\$66	\$111	\$914	\$55,748	\$15,485	61.02	0.28
653	Mass Hall	13.280	ECO 2	138.84	90.6	147.92	1.50	\$736	\$66	\$111	\$914	\$55,748	\$15,485	61.02	0.28
	Mess Hall	13,280	ECO 2	138.84	9.08	147.92	1.50	\$736	\$66	\$111	\$914	\$55,748	\$15,485	61.02	0.28
S-6	Mess Hall	13,280	ECO 2	138.84	9.08	147.92	1.50	\$736	99\$	\$111	\$914	\$55,748	\$15,485	61.02	0.28
	Mess Hall	13.280	ECO 2	138.84	9.08	147.92	1.50	\$736	\$66	\$111	\$914	\$55,748	\$15,485	61.02	0.28
749	T	13,280	ECO 2	138.84	9.08	147.92	1.50	\$736	\$66	\$111	\$914	\$55,748	\$15,485	61.02	0.28
754		13.280	ECO 2	138.84	90.6	147.92	1.50	\$736	\$66	\$111	\$914	\$55,748	\$15,485	61.02	0.28
200	Mess Hall	13,280	EC0 2	138.84	9.08	147.92	1.50	\$736	\$66	\$111	\$914	\$55,748	\$15,485	61.02	0.28
200	Mess Hall	13 280	ECO 2	138.84	90.6	147.92	1.50	\$736	\$66	\$111	\$914	\$55,748	\$15,485	61.02	0.28
836	Т	13.280	EC0 2	138.84	90'6	147.92	1.50	\$736	\$66	\$111	\$914	\$55,748	\$15,485	61.02	0.28
837	Т	13.280	ECO 2	138.84	90.6	147.92	1.50	\$736	\$66	\$111	\$914	\$55,748	\$15,485	61.02	0.28
3 5	Т	13.280	EC0 2	138.84	90'6	147.92	1.50	\$736	\$66	\$111	\$914	\$55,748	\$15,485	61.02	0.28
5	Т	13.280	ECO 2	138.84	80.6	147.92	1.50	\$736	\$66	\$111	\$914	\$55,748	\$15,485	61.02	0.28
1007	T	13.280	ECO 2	138.84	80.6	147.92	1.50	\$736	\$66	\$111	\$914	\$55,748	\$15,485	61.02	0.28
630	T	13.280	E0 1	133.01	8.67	141.68	1.50	\$705	\$63	\$111	\$880	\$54,215	\$14,895	61.63	0.27
3	Т	13 280	E00 1	133.01	8.67	141.68	1.50	\$705	\$63	\$111	\$880	\$54,215	\$14,895	61.63	0.27
2 2 2	Т	13 280	E00 1	133.01	8.67	141.68	1.50	\$705	\$63	\$111	\$880	\$54,215	\$14,895	61.63	0.27
200	Т	13.280	EC0 1	133.01	8.67	141.68	1.50	\$705	\$63	\$111	\$880	\$54,215	\$14,895	61.63	0.27
125	Т	13.280	E00 1	133.01	8.67	141.68	1.50	\$705	\$63	\$111	\$880	\$54,215	\$14,895	61.63	0.27
730	Т	13.280	E00 1	133.01	8.67	141.68	1.50	\$705	\$63	\$111	\$880	\$54,215	\$14,895	61.63	0.27
240	Т	13.280	E00 1	133.01	8.67	141.68	1.50	\$705	\$63	\$111	\$880	\$54,215	\$14,895	61.63	0.27
754	T	13,280	ECO 1	133.01	8.67	141.68	1.50	\$705	\$63	\$111	\$880	\$54,215		61.63	0.27
820		13,280	ECO 1	133.01	8.67	141.68	1.50	\$705	\$63	\$111	\$880			61.63	0.27
2 5	Т	13,280	E00 1	133.01	8.67	141.68	1.50	\$705	\$63	\$111	\$880	\$54,215	\$14,895	61.63	0.27
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		DISCOUNTE	(\$)	\$14,895	\$14,895	\$14,895	\$14,895	\$14,895	\$7,789	\$8,183	\$12,059	\$12,059	\$12,059	\$12,059	\$12,059	\$12,059	\$12,059	\$12,059	\$12,059	\$12,059	\$12,059	\$12,059	\$12,038	\$12,038	\$12,038	\$11,540	\$11,540	\$11,540	\$11,540	\$11,540	\$11,540	\$11,540	\$11,540	\$11,540	\$11,540	\$11,540	
		TOTAL	T (\$)	\$54,215	\$54,215	\$54,215	\$54,215	\$54,215	\$29,219	\$30,958	\$52,575	\$52,575	\$52,575	\$52,575	\$52,575	\$52,575	\$52,575	\$52,575	\$52,575	\$52,575	\$52,575	\$52,575	\$52,484	\$52,484	\$52,484	\$51,082	\$51,082	\$51,082	\$51,082	\$51,082	\$51,082	\$51,082	\$51,082	\$51,082	\$51,082	\$51,082	
	TOTAL ENERGY	COST	(\$/yr)	\$880	\$880	\$880	\$880	\$880	\$481	\$504	\$679	\$679	\$679	\$679	\$679	\$679	\$679	\$679	\$679	\$679	\$679	\$679	\$678	\$678	\$678	\$650	\$650	\$650	\$650	\$650	\$650	\$650	\$650	\$650	\$650	\$650	
	ELEC. DEMAND	COST	(\$/yr)	\$111	\$111	\$111	\$111	\$111	\$111	\$111	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	ELEC.	COST	(\$/yr)	\$63	\$63	\$63	\$63	\$63	\$70	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	NAT. GAS			\$705	\$705	\$705	\$705	\$705	\$300	\$318	\$679	\$679	\$679	\$679	\$679	\$679	\$679	\$679	\$679	\$679	\$629	\$679	\$678	\$678	\$678	\$650	\$650	\$650	\$650	\$650	\$650	\$650	\$650	\$650	\$650	\$650	
	ELEC.	DEMAND	(kW)	1.50	1.50	1.50	1.50	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	00.00	0.00	0.00	00.0	00.0	0.00	0.00	0.00	0.00	0.00	
and the second s	TOTAL	ENERGY	(MBtu/yr)	141.68	141.68	141.68	141.68	141.68	66.13	70.27	128.11	128.11	128.11	128.11	128.11	128.11	128.11	128.11	128.11	128.11	128.11	128.11	127.89	127.89	127.89	122.60	122.60	122.60	122.60	122.60	122.60	122.60	122.60	122.60	122.60	122.60	
Charles of the Control of	ELEC.	ENERGY		8.67	8.67	8.67	8.67	8.67	9.52	10.27	0.00	0.00	0.00	00.00	0.00	00.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	NAT. GAS	ENERGY	(MBtu/yr)	133.01	133.01	133.01	133.01	133.01	56.61	60.00	128.11	128.11	128.11	128.11	128.11	128.11	128.11	128.11	128.11	128.11	128.11	128.11	127.89	127.89	127.89	122.60	122.60	122.60	122.60	122.60	122.60	122.60	122.60	122.60	122.60	122.60	
3			ECO NO.	ECO 1	ECO 2	ECO 2	ECO 2	ECO 2	EC02	EC0 2	ECO 2	EC02	ECO 2	EC02	ECO 2	ECO 1																					
		SAIC	AREA (SF)	13,280	13,280	13,280	13,280	13,280	6,240	6,240	12,155	12,155	12,155	12,155	12,155	12,155	12,155	12,155	12,155	12,155	12,155	12,155	12,134	12,134	12,134	12,155	12,155	12,155	12,155	12,155	12,155	12,155	12,155	12,155	12,155	12,155	
			BLDG NAME	Mess Hall	Branch PX	Branch PX	Administration/Supply																														
		2	NO.	836	837	1010	1011	1027			626	733	734	751	752	823	824		841	1006	1007	1025	633	655	929		733	734	751	752	823	824	840	841	1006	1007	1

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CSC Particle Activation Colored States CSC SEAGE SSC	BLDG		BUILDING ARFA (SF)	FCO NO.	SAVINGS (MBtu/vr)		SAVINGS (MBtu/yr)	SAVINGS (KW)			SAVINGS (\$/yr)	SAVINGS (\$/yr)	INVESTMEN T (\$)	D SAVINGS (\$)	FAYBAC K (yrs)	SIR
6.62 Particular Samura Sa	2	Administration/Supply		FCO 1	122.39		122.39	00.0	\$649	\$0	\$0	\$649	\$50,994	\$11,520	78.61	0.23
2021 Billion 51,000 </td <td>000</td> <td>Administration/Supply</td> <td>L</td> <td>FCO 1</td> <td>122.39</td> <td>0.00</td> <td>122.39</td> <td>00.00</td> <td>\$649</td> <td>\$0</td> <td>\$0</td> <td>\$649</td> <td>\$50,994</td> <td>\$11,520</td> <td>78.61</td> <td>0.23</td>	000	Administration/Supply	L	FCO 1	122.39	0.00	122.39	00.00	\$649	\$0	\$0	\$649	\$50,994	\$11,520	78.61	0.23
Case Barracks, with AC 40640 ECO2 55168 1916 51078 466 \$1864 \$140 \$236 \$150	020	Barracke with A/C		ECO 2	351.63	19.15	370.78	4.66	\$1,864	\$140	\$346	\$2,350	\$180,374	\$39,692	76.76	0.22
252 Britishal With AC 406-00 ECC 2 551-66 19.2 573-00 41.00 53-60 52-20 516-60 57-60 57-60 57-70 51-800 51-10 53-60 51-70 76-70 57-70 51-800 51-10 53-80 52-70 51-800 51-800 51-80	808	Barracks with A/C	40,640	ECO 2	351.63	19.15	370.78	4.66	\$1,864	\$140	\$346	\$2,350	\$180,374	\$39,692	76.76	0.22
8.2. Barracks, with ACC 40.900 ECO.2 35.46 19.22 37.398 4.70 \$1.800 \$1.41 \$3.49 \$2.270 \$1.819.80 \$4.00.40 70.70 70.70 70.70 \$1.800 \$1.41 \$3.49 \$2.270 \$1.819.80 \$4.00.40 70.70 70.70 \$1.800 \$1.41 \$3.49 \$2.270 \$1.819.80 \$4.00.30 70.70 \$1.800 \$1.41 \$3.49 \$2.270 \$1.819.80 \$4.00.30 70.70 \$1.800 \$1.41 \$3.49 \$2.270 \$1.819.80 \$4.000	000	Barracks with A/C	40.640	ECO 2	351.63	19.15	370.78	4.66	\$1,864	\$140	\$346	\$2,350	\$180,374	\$39,692	76.76	0.22
655 Barracks, with AC 40500 ECO2 554.66 1922 373.98 4.70 \$1,800 \$1411 \$349 \$22.370 \$1811,928 \$40,034 76.78 651 Barracks, with AC 4,0990 ECO2 354.66 1922 373.98 4.70 \$1,800 \$1411 \$349 \$22.370 \$1811,928 \$40,034 76.78 652 Barracks, with AC 4,0990 ECO2 354.66 1922 373.98 4.70 \$1,800 \$22.370 \$1811,928 \$40,034 76.76 653 Barracks, with AC 4,0990 ECO2 354.66 1922 373.98 4.70 \$1,800 \$22.370 \$1811,928 \$40,034 76.76 650 Barracks, with AC 4,0990 ECO2 354.66 1922 373.88 4.70 \$1,800 \$23.70 \$1811,928 \$40,034 76.76 1015 Barracks, with AC 4,0990 ECO2 351.68 197.78 4,66 \$1,804 \$140 \$23.90 \$10.77<	620	Barracke with A/C	40 990	ECO 2	354.66	19.32	373.98	4.70	\$1,880	\$141	\$349	\$2,370	\$181,928	\$40,034	76.76	0.22
652 Barracks, with AC 40.990 ECO2 35.466 19.22 37.388 4.70 \$1.800 \$141 \$249 \$2.270 \$118.1228 \$40.034 76.76 652 Barracks, with AC 40.990 ECO2 354.66 19.22 37.388 4.70 \$1.800 \$2.370 \$118.1228 \$40.034 76.76 653 Barracks, with AC 40.990 ECO2 354.66 19.22 37.388 4.70 \$1.800 \$2.370 \$118.1228 \$40.034 76.76 660 Barracks, with AC 40.990 ECO2 354.66 19.22 37.388 4.70 \$1.800 \$2.370 \$118.1228 \$40.034 76.76 1012 Barracks, with AC 40.690 ECO2 354.68 19.75 37.078 4.66 \$1.804 \$2.40 \$2.370 \$118.1228 \$40.034 76.76 1012 Barracks, with AC 40.690 ECO2 351.68 19.15 370.78 4.66 \$1.864 \$1.40 \$2.30 \$1.8	200	Barracks with A/C	40,990	ECO 2	354.66	19.32	373.98	4.70	\$1,880	\$141	\$349	\$2,370	\$181,928	\$40,034	76.76	0.22
652 Barracks, with ACC 40,580 ECO2 35,466 19.22 373.88 4.70 \$1,890 \$141 \$249 \$2,270 \$1819,292 \$40,034 76.76 650 Barracks, with ACC 40,980 ECO2 36,466 19.22 373.88 4.70 \$1,890 \$2,370 \$1819,292 \$40,034 76.76 660 Barracks, with ACC 40,980 ECO2 36,466 19.22 373.88 4.70 \$1,890 \$2,370 \$1819,292 \$40,034 76.76 1012 Barracks, with ACC 40,640 ECO2 36,468 19.22 373.88 4.70 \$1,894 \$140 \$346 \$2,370 \$1819,290 \$40,034 76.76 1012 Barracks, with ACC 40,640 ECO2 35,633 19.15 370.78 4.66 \$1,864 \$140 \$346 \$2,350 \$180,374 \$39,682 76.76 1015 Barracks, with AC 40,640 ECO2 35,633 19.15 370.78 4.66 \$1,8	85.4 1	Barracks with A/C	40,990	ECO 2	354.66	19.32	373.98	4.70	\$1,880	\$141	\$349	\$2,370	\$181,928	\$40,034	76.76	0.22
656 Barracke, with AC 40.990 ECO 2 354.66 19.32 373.98 470 \$1,890 \$141 \$349 \$2.370 \$1161928 \$40.034 76.76 659 Barracke, with AC 40.990 ECO 2 354.66 19.32 373.98 4.70 \$1,890 \$141 \$349 \$2.370 \$1619.28 \$40.034 76.76 1012 Barracke, with AC 40.990 ECO 2 316.66 19.62 \$1.86 \$1.86 \$1.90 \$2.30 \$169.034 \$2.90 1012 Barracke, with AC 40.640 ECO 2 351.63 1915 370.78 4.66 \$1.864 \$140 \$346 \$2.30 \$180.374 \$39.692 76.76 1012 Barracke, with AC 40.640 ECO 2 351.63 1915 370.78 4.66 \$1.864 \$140 \$346 \$2.30 \$160.374 \$39.692 76.76 1012 Barracke, with AC 40.640 ECO 2 351.63 1915 370.78 4.66	253	Barracks with A/C	40 990	ECO 2	.354.66	19.32	373.98	4.70	\$1,880	\$141	\$349	\$2,370	\$181,928	\$40,034	76.76	0.22
650 Barracks, with AC 40990 ECOZ 35466 1932 37398 470 \$1880 \$141 \$349 \$2370 \$181928 \$400044 7676 660 Barracks, with AC 40990 ECOZ 35466 1932 37078 466 \$1880 \$141 \$5346 \$2,250 \$180374 \$396024 76.76 1012 Barracks, with AC 40640 ECOZ 35163 1915 37078 466 \$1864 \$140 \$346 \$2,250 \$180374 \$39682 76.76 1012 Barracks, with AC 40640 ECOZ 35163 1915 37078 466 \$1864 \$140 \$346 \$2,250 \$180374 \$39682 76.76 1016 Barracks, with AC 40640 ECOZ 35163 1915 37078 466 \$1804 \$140 \$2,350 \$180374 \$39682 76.76 1028 Barracks, with AC 40640 ECOZ 35163 1915 37078 466	700	Barracks with A/C	40.990	FC0 2	354.66	19.32	373.98	4.70	\$1,880	\$141	\$349	\$2,370	\$181,928	\$40,034	76.76	0.22
COD State 19.26 \$1.00 \$	650	Barracks with A/C	40 990	ECO 2	354.66	19.32	373.98	4.70	\$1,880	\$141	\$349	\$2,370	\$181,928	\$40,034	76.76	0.22
OUT Barracks, with AC 40640 ECO2 35163 19.15 370.78 4.66 \$1.864 \$140 \$346 \$2.350 \$180.374 \$39.682 76.76 1012 Barracks, with AC 40.640 ECO2 351.63 19.15 370.78 4.66 \$1.864 \$140 \$346 \$2.350 \$180.374 \$39.682 76.76 1014 Barracks, with AC 40.640 ECO2 351.63 19.15 370.78 4.66 \$1.864 \$140 \$2.350 \$180.374 \$39.682 76.76 1014 Barracks, with AC 40.640 ECO2 351.63 19.15 370.78 4.66 \$1.864 \$140 \$2.350 \$180.374 \$39.682 76.76 1016 Barracks, with AC 40.640 ECO2 351.63 19.15 370.78 4.66 \$1.804 \$346 \$2.350 \$180.374 \$39.682 76.76 222 Barracks, with AC 40.640 ECO2 351.63 370.78 4.66 \$1.762	660	Barracks with A/C	40,990	ECO 2	354.66	19.32	373.98	4.70	\$1,880	\$141	\$349	\$2,370	\$181,928	\$40,034	76.76	0.22
10.13 Barracks, with ACC 40.640 ECO2 351.63 19.15 370.78 4.66 \$1.864 \$140 \$2.360 \$1.09.374 \$3.99.682 76.76 10.13 Barracks, with ACC 40.640 ECO2 351.63 19.15 370.78 4.66 \$1.864 \$140 \$2.360 \$10.9374 \$39.962 76.76 10.16 Barracks, with ACC 40.640 ECO2 351.63 19.15 370.78 4.66 \$1.864 \$140 \$2.360 \$10.9374 \$39.962 76.76 10.16 Barracks, with ACC 40.640 ECO2 351.63 19.15 370.78 4.66 \$1.864 \$140 \$2.36 \$180.374 \$39.962 76.76 10.16 Barracks, with AC 40.640 ECO2 351.63 19.15 370.78 4.66 \$1.804 \$140 \$2.36 \$180.374 \$39.982 76.76 22 Barracks, with AC 40.640 ECO2 351.63 19.15 370.78 4.66 \$1.762	200	\neg	40.640	FCO 2	351.63	19.15	370.78	4.66	\$1,864	\$140	\$346	\$2,350	\$180,374	\$39,692	76.76	0.22
Ord Bearracks, with ArC 40640 ECO2 35163 19.15 370.78 4.66 \$1864 \$140 \$346 \$2.360 \$180.374 \$39692 76.76 1015 Barracks, with ArC 40640 ECO2 35163 19.15 370.78 4.66 \$1864 \$140 \$346 \$2.360 \$180374 \$39692 76.76 1016 Barracks, with ArC 40640 ECO2 35163 19.15 370.78 4.66 \$1864 \$140 \$346 \$2.360 \$180374 \$39692 76.76 1029 Barracks, with ArC 40640 ECO2 35163 19.15 370.78 4.66 \$1762 \$346 \$2.360 \$180374 \$39692 76.76 629 Barracks, with ArC 40640 ECO1 332.42 18.07 360.49 4.46 \$1762 \$331 \$2.256 \$175112 \$33692 76.76 629 Barracks, with ArC 40640 ECO1 332.42 18.07 360.49 4.46 <td></td> <td></td> <td>40.640</td> <td>EC0 2</td> <td>351.63</td> <td>19.15</td> <td>370.78</td> <td>4.66</td> <td>\$1,864</td> <td>\$140</td> <td>\$346</td> <td>\$2,350</td> <td>\$180,374</td> <td>\$39,692</td> <td>76.76</td> <td>0.22</td>			40.640	EC0 2	351.63	19.15	370.78	4.66	\$1,864	\$140	\$346	\$2,350	\$180,374	\$39,692	76.76	0.22
1016 Barracks, with AC 40640 ECO2 316.63 19.16 31.864 \$140 \$346 \$2.360 \$180.374 \$39.692 76.76 1016 Barracks, with AC 40.640 ECO2 351.63 19.15 370.78 4.66 \$1864 \$140 \$346 \$2.350 \$180.374 \$39.692 76.76 1028 Barracks, with AC 40.640 ECO2 351.63 19.15 370.78 4.66 \$1.864 \$140 \$346 \$2.350 \$180.374 \$39.692 76.76 1028 Barracks, with AC 40.640 ECO2 331.63 19.15 370.78 4.66 \$1.762 \$331 \$2.225 \$180.37 \$39.962 76.76 527 Barracks, with AC 40.640 ECO1 332.42 18.07 350.49 4.46 \$1.762 \$331 \$2.225 \$175.71 \$133 \$334 \$2.244 \$176.60 \$37.79 \$6.60 \$1.777 \$133 \$334 \$2.244 \$176.60 \$37.79 <td< td=""><td></td><td>$\overline{}$</td><td>40 640</td><td>ECO 2</td><td>351.63</td><td>19.15</td><td>370.78</td><td>4.66</td><td>\$1,864</td><td>\$140</td><td>\$346</td><td>\$2,350</td><td>\$180,374</td><td>\$39,692</td><td>76.76</td><td>0.22</td></td<>		$\overline{}$	40 640	ECO 2	351.63	19.15	370.78	4.66	\$1,864	\$140	\$346	\$2,350	\$180,374	\$39,692	76.76	0.22
Barracks, with AC 40640 ECO2 351.63 19.15 370.78 4.66 \$1.864 \$140 \$346 \$2.360 \$180.374 \$39.692 76.76 Barracks, with AC 40,640 ECO2 351.63 19.15 370.78 4.66 \$1.864 \$140 \$346 \$2.360 \$180.374 \$39.692 76.76 Barracks, with AC 40,640 ECO2 351.63 19.15 370.78 4.66 \$1.864 \$140 \$2.36 \$15.10 \$35.96 76.76 Barracks, with AC 40,640 ECO1 332.42 1807 350.49 4.46 \$1,772 \$133 \$2.255 \$175112 \$375.76 78.69 Barracks, with AC 40,640 ECO1 332.42 1807 350.49 4.46 \$1,777 \$133 \$2.244 \$176.62 \$37.89 78.69 Barracks, with AC 40,990 ECO1 335.28 18.23 353.51 4.50 \$1,777 \$133 \$2.244 \$176.62 \$37.69 78.69		_	40.640	EC0 2	351.63	19.15	370.78	4.66	\$1,864	\$140	\$346	\$2,350	\$180,374	\$39,692	76.76	0.22
Barracks, with ACC 406 do ECO 2 351 63 19.15 370.78 4.66 \$1.864 \$140 \$2.360 \$180.374 \$39.692 76.76 Barracks, with ACC 40.640 ECO 2 351.63 19.15 370.78 4.66 \$1.864 \$140 \$2.36 \$180.374 \$39.692 76.76 Barracks, with AC 40.640 ECO 1 332.42 18.07 350.49 4.46 \$1.762 \$132 \$331 \$2.225 \$175.112 \$37.576 78.69 Barracks, with AC 40.640 ECO 1 332.42 18.07 350.49 4.46 \$1.777 \$133 \$2.225 \$175.112 \$37.576 78.69 Barracks, with AC 40.690 ECO 1 335.28 18.23 355.51 4.50 \$1,777 \$133 \$2.244 \$176.620 \$37.899 78.69 Barracks, with AC 40.990 ECO 1 335.28 18.23 355.51 4.50 \$1,777 \$133 \$2.244 \$176.620 \$37.899 78.69	2 2	1	40.640	ECO 2	351.63	19.15	370.78	4.66	\$1,864	\$140	\$346	\$2,350	\$180,374	\$39,692	76.76	0.22
Barracks, with A/C 40640 ECO2 351.63 1915 370.78 4.66 \$1,864 \$140 \$346 \$236 \$150,374 \$39.992 76.76 Barracks, with A/C 40640 ECO1 332.42 1807 350.49 4.46 \$1,762 \$132 \$331 \$2255 \$175,112 \$37.576 7869 Barracks, with A/C 40640 ECO1 332.42 1807 350.49 4.46 \$1,762 \$132 \$32.25 \$175,112 \$37.59 7869 Barracks, with A/C 40640 ECO1 332.42 1807 350.49 4.46 \$1,777 \$133 \$32.24 \$176.50 \$37.89 7869 7869 Barracks, with A/C 40,990 ECO1 335.28 1823 353.51 4.50 \$1,777 \$133 \$32.44 \$176.620 \$37.899 7869 Barracks, with A/C 40,990 ECO1 335.28 1823 353.51 4.50 \$1,777 \$133 \$224 \$176.620 \$37.899	200	7	40.640	EC0 2	351.63	19.15	370.78	4.66	\$1,864	\$140	\$346	\$2,350	\$180,374	\$39,692	76.76	0.22
Barracks, with AC 40,640 ECO 1 332,42 1807 360,49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with AC 40,640 ECO 1 332,42 1807 350,49 4.46 \$1,762 \$132 \$225 \$175,112 \$37,576 78.69 Barracks, with AC 40,640 ECO 1 332,42 18.07 350,49 4.46 \$1,772 \$133 \$22,24 \$176,620 \$37,599 78.69 Barracks, with AC 40,990 ECO 1 335,28 18.23 353,51 4.50 \$1,777 \$133 \$32,44 \$176,620 \$37,899 78.69 Barracks, with AC 40,990 ECO 1 335,28 18.23 353,51 4.50 \$1,777 \$133 \$32,44 \$176,620 \$37,899 78.69 Barracks, with AC 40,990 ECO 1 335,28 18.23 353,51 4.50 \$1,777 \$133 \$22,44 \$176,620 \$37,899 78.69 <td>1020</td> <td>\top</td> <td>40 640</td> <td>ECO 2</td> <td>351.63</td> <td>19.15</td> <td>370.78</td> <td>4.66</td> <td>\$1,864</td> <td>\$140</td> <td>\$346</td> <td>\$2,350</td> <td>\$180,374</td> <td>\$39,692</td> <td>76.76</td> <td>0.22</td>	1020	\top	40 640	ECO 2	351.63	19.15	370.78	4.66	\$1,864	\$140	\$346	\$2,350	\$180,374	\$39,692	76.76	0.22
Barracks, with AC 40640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$334 \$2,225 \$175,112 \$37,576 78.69 Barracks, with AC 40640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$175,112 \$37,576 78.69 Barracks, with AC 40,640 ECO 1 335.28 18.23 35.51 4.50 \$1,777 \$133 \$32.44 \$176,620 \$37,899 78.69 Barracks, with AC 40,990 ECO 1 335.28 18.23 35.51 4.50 \$1,777 \$133 \$32.44 \$176,620 \$37,899 78.69 Barracks, with AC 40,990 ECO 1 335.28 18.23 35.51 4.50 \$1,777 \$133 \$32.44 \$176,620 \$37,899 78.69 Barracks, with AC 40,990 ECO 1 335.28 18.23 35.351 4.50 \$1,777 \$133 \$32.44 \$176,620 \$37,899 78.69 Ba	527		40 640	EC0 1	332.42	18.07	350.49	4.46	\$1,762	\$132	\$331	\$2,225	\$175,112	\$37,576	78.69	0.21
Barracks, with A/C 40,690 ECO 1 332.42 1807 360.49 4.46 \$1,762 \$133 \$2.25 \$175,112 \$37,576 78.69 Barracks, with A/C 40,690 ECO 1 335.28 18.23 353.61 4.50 \$1,777 \$133 \$34 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 353.61 4.50 \$1,777 \$133 \$2244 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 353.4 \$2.244 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 353.51 4.50 \$1,777 \$133 \$2244 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 353.51 4.50 \$1,777 \$133 \$2244 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1<	90.3	Barracke with A/C	40 640	E01	332.42	18.07	350.49	4.46	\$1,762	\$132	\$331	\$2,225	\$175,112	\$37,576	78.69	0.21
Barracks, with A/C 40.990 ECO 1 335.28 18.23 4.50 \$1,777 \$133 \$334 \$2,244 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 4.50 \$1,777 \$133 \$334 \$12,44 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 353.51 4.50 \$1,777 \$133 \$334 \$12,44 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 353.51 4.50 \$1,777 \$133 \$2,244 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 353.51 4.50 \$1,777 \$133 \$2,244 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 353.51 4.50 \$1,777 \$133 \$2,244 \$176,620 \$37,899 78.69	020	Barracks with A/C	40.640	E00 1	332.42	18.07	350.49	4.46	\$1,762	\$132	\$331	\$2,225		\$37,576	78.69	0.21
Barracks, with A/C 40,990 ECO 1 335.28 18.23 35.51 4.50 \$1,777 \$133 \$334 \$2.244 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 35.51 4.50 \$1,777 \$133 \$334 \$2.244 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 35.51 4.50 \$1,777 \$133 \$2.244 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 35.351 4.50 \$1,777 \$133 \$2.244 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 35.51 4.50 \$1,777 \$133 \$2.244 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.242 18.07 350.49 4.46 \$1,762 \$132 \$2.244 \$176,620 \$37,576	620	Barracke with A/C	40 990	ECO 1	335.28	18.23	353.51	4.50	\$1,777	\$133	\$334	\$2,244		\$37,899	78.69	0.21
Barracks, with A/C 40,990 ECO 1 335.28 18.23 353.51 4.50 \$1,777 \$133 \$324 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 353.51 4.50 \$1,777 \$133 \$334 \$2,244 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 353.51 4.50 \$1,777 \$133 \$324 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 353.51 4.50 \$1,777 \$133 \$2,244 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 353.51 4.50 \$1,777 \$133 \$2,244 \$176,620 \$37,899 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$2,225 \$175,112 \$37,576 78.69	459	Barracks with A/C	40,990	E00 1	335.28	18.23	353.51	4.50	\$1,777	\$133	\$334	\$2,244	\$176,620	\$37,899	78.69	0.21
Barracks, with A/C 40,990 ECO 1 335.28 18.23 4.50 \$1,777 \$133 \$334 \$2,244 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 35.35.1 4.50 \$1,777 \$133 \$334 \$1,76,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 353.51 4.50 \$1,777 \$133 \$224 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 353.51 4.50 \$1,777 \$133 \$224 \$176,620 \$37,576 78.69 Barracks, with A/C 40,990 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$224 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 </td <td>651</td> <td>Barracks, with A/C</td> <td>40,990</td> <td>ECO 1</td> <td>335.28</td> <td>18.23</td> <td>353.51</td> <td>4.50</td> <td>\$1,777</td> <td>\$133</td> <td>\$334</td> <td>\$2,244</td> <td></td> <td>\$37,899</td> <td>78.69</td> <td>0.21</td>	651	Barracks, with A/C	40,990	ECO 1	335.28	18.23	353.51	4.50	\$1,777	\$133	\$334	\$2,244		\$37,899	78.69	0.21
Barracks, with A/C 40,990 ECO 1 335.28 18.23 353.51 4.50 \$1,777 \$133 \$334 \$2,244 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 353.51 4.50 \$1,777 \$133 \$334 \$12,244 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 353.51 4.50 \$1,777 \$133 \$2,244 \$176,620 \$37,899 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331	652	Barracks, with A/C	40,990	ECO 1	335.28	18.23	353.51	4.50	\$1,777	\$133	\$334	\$2,244		\$37,899	78.69	0.21
Barracks, with A/C 40,990 ECO 1 335.28 18.23 353.51 4.50 \$1,777 \$133 \$334 \$2,244 \$176,620 \$37,899 78.69 Barracks, with A/C 40,990 ECO 1 335.28 18.23 353.51 4.50 \$1,772 \$133 \$2,244 \$176,620 \$37,899 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331	654	Barracks, with A/C	40,990	ECO 1	335.28	18.23	353.51	4.50	\$1,777	\$133	\$334	\$2,244		\$37,899	78.69	0.21
Barracks, with A/C 40,640 ECO 1 335.28 18.23 4.50 \$1,772 \$133 \$324 \$176,620 \$37,899 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 <t< td=""><td>659</td><td>Т</td><td>40,990</td><td>ECO 1</td><td>335.28</td><td>18.23</td><td>353.51</td><td>4.50</td><td>\$1,777</td><td>\$133</td><td>\$334</td><td>\$2,244</td><td></td><td>\$37,899</td><td>78.69</td><td>0.21</td></t<>	659	Т	40,990	ECO 1	335.28	18.23	353.51	4.50	\$1,777	\$133	\$334	\$2,244		\$37,899	78.69	0.21
Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132	990	Т	40,990	ECO 1	335.28	18.23	353.51	4.50	\$1,777	\$133		\$2,244	\$176,620	\$37,899	78.69	0.21
Barracks, with A/C 40,640 ECO 1 332,42 18.07 350,49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332,42 18.07 350,49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332,42 18.07 350,49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332,42 18.07 350,49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332,42 18.07 350,49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69	101	Т	40,640	E00 1	332.42	18.07	350.49	4.46	\$1,762		\$331	\$2,225		\$37,576	78.69	0.21
Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69	101	T	40,640	ECO 1	332.42	18.07	350.49	4.46	\$1,762			\$2,225		\$37,576	78.69	0.21
Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69	101	1	40,640	ECO 1	332.42	18.07	350.49	4.46	\$1,762			\$2,225		\$37,576	78.69	0.21
Barracks, with A/C 40.640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69 Barracks, with A/C 40.640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69	100	$\overline{}$	40.640	E00 1	332.42	18.07	350.49	4.46	\$1,762	\$132		\$2,225		\$37,576	78.69	0.21
Barracks with A/C 40,640 ECO 1 332.42 18.07 350.49 4.46 \$1,762 \$132 \$331 \$2,225 \$175,112 \$37,576 78.69	1016	$\overline{}$	40.640	ECO 1	332.42	18.07	350.49	4.46	\$1,762	\$132		\$2,225		\$37,576	78.69	0.21
	000	\top	40 640	ECO 1	332.42	18.07	350.49	4.46	\$1,762	\$132		\$2,225	\$175,112	\$37,576	78.69	0.21

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ECONOMIC SUMMARY OF ECOS
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					i			O E O	Ç.	ELEC.	TOTAL			· . <u></u>	
				NAT. GAS ENERGY	LEC.			_		COST		TOTAL	DISCOUNTE	SIMPLE	
BLDG	AMAN SOLIO	BUILDING ARFA (SF)	ECO NO.	SAVINGS SA (MBtu/vr) (M	VINGS Btu/vr)	SAVINGS (MBtu/yr)	S/ VINGS (kW)	SAVINGS (S/yr)	SAVINGS (\$/yr)	SAVINGS (\$/yr)	SAVINGS (\$/yr)	INVESTMEN T (\$)	D SAVINGS (\$)	K (yrs)	SIR
500	a je	40.640	ECO 1	332.42	18.07	350.49	4.46	\$1,762	\$132	\$331	\$2,225	\$175,112	\$37,576	78.69	0.21
625		6,163	ECO 2	70.48	7.75	78.23	00.00	\$374	\$57	\$0	\$430	\$38,019	\$7,417	88.36	0.20
631	Battalion HQ	6,163	ECO 2	70.48	7.75	78.23	0.00	\$374	\$57	\$	\$430	\$38,019	\$7,417	88.36	0.20
650	Battalion HQ	6,163	ECO 2	70.48	7.75	78.23	0.00	\$374	\$57	\$0	\$430	\$38,019	\$7,417	88.36	0.20
658	Battalion HQ	6,163	ECO 2	70.48	7.75	78.23	0.00	\$374	\$57	\$0	\$430	\$38,019	\$7,417	88.36	0.20
732	Battalion HO	6,163	ECO 2	70.48	7.75	78.23	0.00	\$374	\$57	\$0	\$430	\$38,019	\$7,417	88.36	0.20
740	Battalion HQ	6,163	ECO 2	70.48	7.75	78.23	0.00	\$374	\$57	\$0	\$430	\$38,019	\$7,417	88.36	0.20
750	Battalion HQ	6,163	ECO 2	70.48	7.75	78.23	0.00	\$374	\$57	\$0	\$430	\$38,019	\$7,417	88.36	0.20
753	Battalion HO	6,163	EC0 2	.70.48	7.75	78.23	0.00	\$374	\$57	\$0	\$430	\$38,019	\$7,417	88.36	0.20
822	Battalion HO	6,163	EC0 2	70.48	7.75	78.23	0.00	\$374	\$57	\$0	\$430	\$38,019	\$7,417	88.36	0.20
825		6,163	ECO 2	70.48	7.75	78.23	0.00	\$374	\$57	\$0	\$430	\$38,019	\$7,417	88.36	0.20
838	1	6,163	ECO 2	70.48	7.75	78.23	0.00	\$374	\$57	\$0	\$430	\$38,019	\$7,417	88.36	0.20
842	Т	6.163	EC0 2	70.48	7.75	78.23	0.00	\$374	\$57	\$0	\$430	\$38,019	\$7,417	88.36	0.20
	_	6,163	ECO 2	70.48	7.75	78.23	00.00	\$374	\$57	\$0	\$430	\$38,019	\$7,417	88.36	0.20
60g	Т	6,163	ECO 2	70.48	7.75	78.23	0.00	\$374	\$57	\$0	\$430	\$38,019	\$7,417	88.36	0.20
	$\overline{}$	6,163	ECO 2	70.48	7.75	78.23	0.00	\$374	\$57	\$0	\$430	\$38,019	\$7,417	88.36	0.20
103	_	6.163	EC0 2	70.48	7.75	78.23	0.00	\$374	\$57	\$0	\$430	\$38,019	\$7,417	88.36	0.20
625	3	6,163	ECO 1	67.50	7.30	74.80	0.00	\$358	\$53	\$0	\$411	\$37,132	\$7,091	90.30	0.19
63	Т	6,163	ECO 1	67.50	7.30	74.80	0.00	\$358	\$53	\$0	\$411	\$37,132	\$7,091	90.30	0.19
650	Т	6,163	EC0 1	67.50	7.30	74.80	0.00	\$358	\$53	\$	\$411	\$37,132	\$7,091	90.30	0.19
858	Т	6,163	ECO 1	67.50	7.30	74.80	0.00	\$358	\$53	\$0	\$411	\$37,132	\$7,091	90.30	0.19
732	Т	6,163	ECO 1	67.50	7.30	74.80	0.00	\$358	\$53	\$0	\$411	\$37,132	\$7,091	90.30	0.19
740		6,163	ECO 1	67.50	7.30	74.80	0.00	\$358	\$53	\$0	\$411	\$37,132	\$7,091	90.30	0.19
750	Г	6,163	ECO 1	67.50	7.30	74.80	0.00	\$358	\$53	Ç,	\$411	\$37,132	\$7,091	90.30	0.19
753	T	6,163	ECO 1	67.50	7.30	74.80	0.00	\$358	\$53	\$	\$411	\$37,132	\$7,091	90.30	0.19
822		6,163	ECO 1	67.50	7.30	74.80	0.00	\$358	\$53	\$	\$411	\$37,132	\$7,091	90.30	0.19
825	П	6,163	ECO 1	67.50	7.30	74.80	0.00	\$358	\$53	\$0	\$411	\$37,132	\$7,091	90.30	0.19
838	Т	6,163	ECO 1	67.50	7.30	74.80	00.00	\$358	\$53	\$0	\$411	\$37,132	\$7,091	90.30	0.19
842	Т	6.163	E00 1	67.50	7.30	74.80	00.0	\$358	\$53	\$0	\$411	\$37,132	\$7,091	90.30	0.19
1008	Т	6.163	E00 1	67.50	7.30	74.80	00.0	\$358	\$53	\$0	\$411	\$37,132	\$7,091	90.30	0.19
1009		6,163	EC0 1	67.50	7.30	74.80	00.00	\$358	\$53	\$	\$411	\$37,132	\$7,091	90.30	0.19
1022	$\overline{}$	6.163	E00 1	67.50	7.30	74.80	00.00	\$358	\$53	\$0	\$411	\$37,132	\$7,091	90.30	0.19
1023	$\overline{}$	6,163	ECO 1	67.50	7.30	74.80	00.0	\$328	\$53	\$0	\$411	\$37,132	\$7,091	90.30	0.19
638		_	EC0 2	34.81	5.56	40.37	00.0	\$184	\$41	\$	\$225	\$21,836	\$3,839	96.95	0.18
743	Т		EC0 2	34.81	5.56	40.37	00.0	\$184	\$41	\$0	\$225	\$21,836	\$3,839	96.95	0.18
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				NAT. GAS	ELEC.	TOTAL	ELEC.	NAT. GAS	ELEC.	ELEC. DEMAND	TOTAL				
2	ei	CNIC		ENERGY EN	E S	ENERGY	0		-		COST	TOTAL	DISCOUNTE	SIMPLE	
S S	BLDG NAME	AREA (SF)	ECO NO.	(MBtu/yr)	Btu/yr)	(MBtu/yr)	_			_	(\$/yr)	INVESTMEN T (\$)	D SAVINGS (\$)	K (vrs)	SIR
832	Administration Bldg	3,700	ECO 2	34.81	5.56	40.37	00.00	\$184	\$41	\$0	\$225	\$21,836	\$3,839	96.95	0.18
638	Administration Bldg	3,700	ECO 1	33.13	5.26	38.39	0.00	\$176	\$38	\$0	\$214	\$21,565	\$3,649	100.74	0.17
743	\neg	3,700	Eco 1	33.13	5.26	38.39	0.00	\$176	\$38	\$0	\$214	\$21,565	\$3,649	100.74	0.17
832	Administration Bldg	3,700	ECO 1	33.13	5.26	38.39	0.00	\$176	\$38	\$0	\$214	\$21,565	\$3,649	100.74	0.17
730	Barracks, without A/C	40,640	ECO 2	278.90	0.00	278.90	00.00	\$1,478	\$	\$0	\$1,478	\$183,884	\$26,252	124.40	0.14
731	Barracks, without A/C	40,640	ECO 2	278.90	0.00	278.90	0.00	\$1,478	\$0	\$0	\$1,478	\$183,884	\$26,252	124.40	0.14
736	Barracks, without A/C	40,640	ECO 2	278.90	0.00	278.90	0.00	\$1,478	\$0	\$0	\$1,478	\$183,884	\$26,252	124.40	0.14
737	Barracks, without A/C	40,640	ECO 2	278.90	0.00	278.90	0.00	\$1,478	\$0	\$0	\$1,478	\$183,884	\$26,252	124.40	0.14
738		40,640	ECO 2	. 278.90	0.00	278.90	0.00	\$1,478	\$0	\$0	\$1,478	\$183,884	\$26,252	124.40	0.14
747	Barracks, without A/C	40,640	ECO 2	278.90	0.00	278.90	0.00	\$1,478	\$0	\$0	\$1,478	\$183,884	\$26,252	124.40	0.14
748	Barracks, without A/C	40,640	ECO 2	278.90	0.00	278.90	0.00	\$1,478	\$0	\$0	\$1,478	\$183,884	\$26,252	124.40	0.14
755	Barracks, without A/C	40,640	ECO 2	278.90	0.00	278.90	0.00	\$1,478	\$0	\$0	\$1,478	\$183,884	\$26,252	124.40	0.14
756	Barracks, without A/C	40,640	ECO 2	278.90	0.00	278.90	0.00	\$1,478	\$0	\$0	\$1,478	\$183,884	\$26,252	124.40	0.14
<u>/</u> 2/	Barracks, without A/C		ECO 2	278.90	0.00	278.90	0.00	\$1,478	\$	\$0	\$1,478	\$183,884	\$26,252	124.40	0.14
915	Barracks, without A/C	40,640	ECO 2	278.90	0.00	278.90	0.00	\$1,478	\$0	0\$	\$1,478	\$183,884	\$26,252	124.40	0.14
816	\neg	_	ECO 2	278.90	0.00	278.90	0.00	\$1,478	\$0	%	\$1,478	\$183,884	\$26,252	124.40	0.14
817	Barracks, without A/C	40,640	ECO 2	278.90	0.00	278.90	0.00	\$1,478	Q\$	\$	\$1,478	\$183,884	\$26,252	124.40	0.14
818	Barracks, without A/C	40,640	ECO 2	278.90	0.00	278.90	0.00	\$1,478	\$0	\$	\$1,478	\$183,884	\$26,252	124.40	0.14
819	\neg	\perp	ECO 2	278.90	0.00	278.90	0.0	\$1,478	\$	\$	\$1,478	\$183,884	\$26,252	124.40	0.14
827			ECO 2	278.90	0.00	278.90	0.00	\$1,478	S S	%	\$1,478	\$183,884	\$26,252	124.40	0.14
828			EC02	278.90	0.00	278.90	0.0	\$1,478	\$0	%	\$1,478	\$183,884	\$26,252	124.40	0.14
829	Т		EC02	278.90	0.00	278.90	0.00	\$1,478	\$	\$	\$1,478	\$183,884	\$26,252	124.40	0.14
830	Т	_	EC02	278.90	0.00	278.90	0.00	\$1,478	9	QŞ	\$1,478	\$183,884	\$26,252	124.40	0.14
831	Barracks, without A/C		EC02	278.90	0.00	278.90	0.0	\$1,478	QÇ	တ္တ	\$1,478	\$183,884	\$26,252	124.40	0.14
730	Barracks, without A/C		E00 1	261.73	00.0	261.73	0.0	\$1,387	%	\$	\$1,387	\$178,577	\$24,636	128.73	0.14
731	\neg		E00 1	261.73	0.00	261.73	0.0	\$1,387	Ç,	တို	\$1,387	\$178,577	\$24,636	128.73	0.14
736	Т		E01	261.73	0.00	261.73	0.0	\$1,387	%	တ္တ	\$1,387	\$178,577	\$24,636	128.73	0.14
737	Barracks, without A/C	_	ECO 1	261.73	0.00	261.73	0.00	\$1,387	O\$	\$0	\$1,387	\$178,577	\$24,636	128.73	0.14
738	Barracks, without A/C		E00 1	261.73	00.0	261.73	0.0	\$1,387	\$	\$	\$1,387	\$178,577	\$24,636	128.73	0.14
747	Barracks, without A/C	_	ECO 1	261.73	00.0	261.73	0.00	\$1,387	\$	0\$	\$1,387	\$178,577	\$24,636	128.73	0.14
748	Barracks, without A/C		E00 1	261.73	00.0	261.73	0.0	\$1,387	&	Ç,	\$1,387	\$178,577	\$24,636	128.73	0.14
755	Barracks, without A/C		E00 1	261.73	00.0	261.73	0.00	\$1,387	Ç,	O\$	\$1,387	\$178,577	\$24,636	128.73	0.14
756	Barracks, without A/C		ECO 1	261.73	00.0	261.73	0.00	\$1,387	Ç\$	\$0	\$1,387	\$178,577	\$24,636	128.73	0.14
757			E00 1	261.73	0.00	261.73	0.00	\$1,387	O\$	\$0	\$1,387	\$178,577	\$24,636	128.73	0.14
815	Barracks, without A/d	40,640	ECO 1	261.73	0.00	261.73	0.00	\$1,387	\$0	\$0	\$1,387	\$178,577	\$24,636	128.73	0.14

TABLE ES-1

ECONOMIC SUMMARY OF ECOS - RANKED BY SIR

BUIDING	BUILDIN	(5		NAT. GAS ENERGY SAVINGS	ELEC. TOTAL ENERGY SAVINGS SAVINGS	TOTAL ENERGY SAVINGS	ELEC. DEMAND	ELEC. TOTAL ELEC. NAT. GAS ELEC. DEMAND ENERGY ENERGY DEMAND COST COST SAVINGS SAVINGS SAVINGS SAVINGS	ELEC. ELEC. DEMAND COST COST SAVINGS	ELEC. DEMAND COST SAVINGS	TOTAL ENERGY COST SAVINGS IN	TOTAL	DISCOUNTE	SIMPLE	
BLDG NAME AREA (SF) ECO NO. (MBtu/yr)	ECO NO. (MBtu/yr)	(MBtu/yr)		(MBtu/yr) (M	ξ.	(MBtu/yr)	(kW)	(\$/yr)	(\$/yr)	(\$/yr)	(\$/yr)		(\$)	K (yrs)	SR
816 Barracks, without A/G 40,640 ECO 1 261.73 0.00	40,640 ECO 1 261.73	261.73	4	0.00	- 1	261.73	0.00	\$1,387	\$0	0\$	\$1,387	\$178,577	\$24,636	128.73	0.14
817 Barracks, without A/Q 40,640 ECO 1 261.73 0.00	40,640 ECO 1 261.73	261.73	\dashv	0.00		261.73	0.00	\$1,387	\$0	\$0	\$1,387	\$178,577	\$24,636	128.73	0.14
818 Barracks, without A/C 40,640 ECO 1 261.73 0.00	40,640 ECO 1 261.73	261.73	-	0.00	\rightarrow	261.73	0.00	\$1,387	\$	\$0	\$1,387	\$178,577	\$24,636	128.73	0.14
819 Barracks, without A/G 40,640 ECO 1 261.73 0.00	40,640 ECO 1 261.73	261.73	-	0.00		261.73	0.00	\$1,387	\$0	\$0	\$1,387	\$178,577	\$24,636	128.73	0.14
827 Barracks, without A/G 40,640 ECO 1 261.73 0.00	40,640 ECO 1 261.73	261.73	-	0.00	\neg	261.73	0.00	\$1,387	\$0	\$0	\$1,387	\$178,577	\$24,636	128.73	0.14
828 Barracks, without A/G 40,640 ECO 1 261.73 0.00	40,640 ECO 1 261.73	261.73	-	0.00		261.73	0.00	\$1,387	\$0	\$0	\$1,387	\$178,577	\$24,636	128.73	0.14
829 Barracks, without A/Q 40,640 ECO 1 261.73 0.00	40,640 ECO 1 261.73	261.73	\dashv	0.00		261.73	0.00	\$1,387	\$0	\$0	\$1,387	\$178,577	\$24,636	128.73	0.14
830 Barracks, without A/q 40,640 ECO 1 261.73 0.00	40,640 ECO 1 261.73	261.73	-	0.00		261.73	0.00	\$1,387	\$0	\$0	\$1,387	\$178,577	\$24,636	128.73	0.14
831 Barracks, without A/Q 40,640 ECO 1 261.73 0.00	40,640 ECO 1 · 261.73	. 261.73	-	0.00		261.73	0.00	\$1,387	\$0	\$0	\$1,387	\$178,577	\$24,636	128.73	0.14
640 Gymnasium 20,425 ECO 1 160.33 0.00	ECO 1 160.33	160.33	4	0.00	_	160.33	0.00	\$850	\$0	\$0	\$850	\$129,351	\$15,092	152.22	0.12
746 Gymnasium 20,425 ECO 1 160.33 0.00	ECO 1 160.33	160.33	\dashv	0.00	\neg	160.33	0.00	\$850	\$0	\$0	\$850	\$129,351	\$15,092	152.22	0.12
826 Gymnasium 20,425 ECO 1 160.33 0.00	ECO 1 160.33	160.33	+	0.00		160.33	0.00	\$850	\$0	\$0	\$850	\$129,351	\$15,092	152.22	0.12
640 Gymnasium 20,425 ECO 2 166.97 0.00	ECO 2 166.97	166.97	+	0.00		166.97	0.00	\$885	\$0	\$0	\$885	\$139,097	\$15,717	157.18	0.11
746 Gymnasium 20,425 ECO 2 166,97 0.00	ECO 2 166.97	166.97	\dashv	0.00	T	166.97	0.00	\$885	\$0	\$0	\$885	\$139,097	\$15,717	157.18	0.11
826 Gymnasium 20,425 ECO 2 166.97 0.00	ECO 2 166.97	166.97	+	0.00	П	166.97	0.00	\$885	\$0	\$0	\$885	\$139,097	\$15,717	157.18	0.11
844 Brigade HQ 9,890 ECO 1 45.94 12.32	ECO 1 45.94	45.94	-	12.3		58.25	0.86	\$243	\$90	\$64	\$397	\$61,881	\$6,425	155.79	0.10
1018 Brigade HQ 9,890 ECO 1 45.94 12.32	ECO 1 45.94	45.94		12.32		58.25	0.86	\$243	\$30	\$64	\$397	\$61,881	\$6,425	155.79	0.10
636 Brigade HQ 9,236 ECO 1 42.90 11.50	ECO 1 42.90	1 42.90	+	11.50		54.40	0.80	\$227	\$84	\$29	\$371	\$57,789	\$6,000	155.79	0.10
741 Brigade HQ 9,236 ECO 1 42.90 11.50	ECO 1 42.90	42.90	\dashv	11.50		54.40	0.80	\$227	\$84	\$59	\$371	\$57,789	\$6,000	155.79	0.10
844 Brigade HQ 9,890 ECO 2 48.27 12.83	ECO 2 48.27	48.27	\dashv	12.83		61.10	98.0	\$256	\$94	\$64	\$413	\$65,384	969'9\$	158.19	0.10
1018 Brigade HQ 9,890 ECO 2 48.27 12.83	ECO 2 48.27	48.27	-	12.8		61.10	98.0	\$256	\$94	\$64	\$413	\$65,384	969'9\$	158.19	0.10
636 Brigade HQ 9,236 ECO 2 45.08 11.98	ECO 2 45.08	45.08	+	11.9		57.06	0.80	\$239	\$88	\$29	\$386	\$61,061	\$6,253	158.19	0.10
ECO 2	45.08		45.08 11.90	11.9	·	57.06	0.80	\$239	\$88	\$59	\$386	\$61.061	\$6.253	158.19	0.10



APPENDIX A
ENERGY COST ANALYSIS